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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,068	04/12/2005	Daisuke Kancnari	AOK-0235	2536
23353 7590 06/19/2007 RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036			EXAMINER WU, IVES J	
			ART UNIT 1724	PAPER NUMBER
			MAIL DATE 06/19/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,068

Applicant(s)

KANENARI, DAISUKE

Examiner

Ives Wu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

(1). Applicants' Remarks and Amendments filed on 04/06/2007 have been received.

Claim 1 is amended. Claims 2-3 and 7 were cancelled previously.

The 112 1st rejection of claims 1, 4-6 and 8 in prior Office Action dated 11/08/2006 is withdrawn in response to the Amendments filed on 4/6/2007.

Upon further consideration, new ground of rejections for claims 1,4-6 and 8 are introduced in the following.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(2). **Claims 1,5-6 and 8** are rejected under 35 U.S.C. 103(a) as being obvious over Kanenari et al (WO 03/029029A1), relied upon the English Translation of Kanenari et al (US07117911B2).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter

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disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2). Because the prior art Kanenari et al (US07117911B2) disclose a pneumatic tire having run-flat capability including a adhesive rubber layer which reads on the rubber composition of instant claim 1, except the carbon nitrogen adsorption area of adhesive rubber is not given any limitation. Although the Example g illustrate the use of Seast 300 with N₂SA of 84 m₂/g, the selection of the N₂SA of carbon black for different parts of tire would be obvious in order to optimize the performance.

As to component A) more than 60 parts by wt but not more than 95 parts by wt of a rubber component comprising (i) natural rubber and (ii) poly-butadiene rubber in a peroxide-cross-linkable rubber composition having a run flat property in **independent claim 1**, a run flat pneumatic tire in **claim 5**, an organic peroxide cross-linking agent in **claim 8**, Kanenari et al (07117911B2) disclose the a pneumatic tire having **run flat** capability (Col. 1, line 6-7). There is still further provided the pneumatic tire having a run flat capability between the crescent shaped reinforcing rubber and the carcass, a rubber composition comprising 100 parts by wt of a total rubber amount of 50 to 85 parts by wt of at least one diene-based rubber selected from the group comprised of a natural rubber, polybutadiene rubber (Col. 2, line 14-21). 0.3 to 10 parts by wt of organic peroxide is used for cross-linking an ethylenically unsaturated nitrile-conjugated diene-based highly saturated rubber (Col. 6, line 34-36, Col. 2, line 26-27).

As to component B) at least 5 parts by wt but less than 40 parts by wt of a polar polymer comprising 100 parts by wt of an ethylenically unsaturated nitrile-conjugated diene-based high saturation copolymer rubber having a conjugated diene unit content of 30 wt% or less and 20 to 120 parts by wt of a metal salt of an ethylenically unsaturated carboxylic acid blended in **independent claim 1**, Kanenari et al (07117911B2) disclose 15 to 50 parts by wt of an ethylenic unsaturated nitrile-conjugated diene-based highly unsaturated rubber having a content of

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conjugated diene units of 30 wt% or less, and 10 to 60 parts by wt of a metal salt of an ethylenic unsaturated carboxylic acid (Col. 2, line 22-26).

As to component C) carbon black having a nitrogen specific surface area of not more than 70 m²/g in an amount so that the total weight of component B) and C) becoming 20 to 70 parts by wt, based upon 100 parts by wt of the total amount of components A) and B) in **independent claim 1**, Kanenari et al disclose the use of filler such as carbon black (Col. 7, line 35). As illustrated in Table III, the formula g), the carbon black amount reads on the limitation of instant claim. Although Kanenari et al disclose the use of carbon black - Seast 300 in Formula g having N₂SA about 82 m²/g, it is well known in the art that the N₂SA of carbon black for tire carcass to be 60 m²/g or less, the N₂SA of carbon black for side tread to be 100 m²/g or less, preferably 30 to 90 m²/g, as evidenced by Midorikawa et al (US06103811A). Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to choose the nitrogen specific adsorption area for carbon black to be not greater than 70 m²/g in order to provide best function of fillers such as mechanical properties for the part of tire. "where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical", *In re Woodruff* 16 USPQ2d 1934.

As to the usage for reinforcing wall and/or bead filler without using an adhesive rubber in **claim 6**, because the rubber composition disclosed by Kanenari et al is substantially identical to the rubber composition in the applicant's claim 1, it will be useful in reinforcing wall and/or bead filler as well, the intended use must result in a manipulative difference as compared to the prior art. *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(2). **Claim 4** is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kanenari et al (WO 03/029029A1) relied on the English Translation US07117911B2).

As to the limitation of **claim 4**, in view of substantially identical peroxide-cross-linkable rubber composition disclosed by Kanenari et al, and by applicant, it is examiner's position to believe that the rubber composition of Kanenari et al would inherently possess the 50% module of rubber composition to be 3.0 to 10 MPa and a $\tan\delta$ at 100 °C not more than 0.15 as claimed. Since USPTO does not have facilities to conduct the measurements, the burden now is shifted to Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

ALTERNATIVELY, CLAIMS 1, 4-6 AND 8 ARE REJECTED IN THE FOLLOWING:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(3). **Claims 1, 4-6 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over McKinstry et al (US04192790).

As to component B) at least 5 parts by wt but less than 40 parts by wt of a polar polymer comprising 100 parts by wt of an ethylenically unsaturated nitrile-conjugated diene-based high saturation copolymer rubber having conjugated diene unit content of 30 wt% or less and 20 to 120 parts by wt of a metal salt of an ethylenically unsaturated carboxylic acid blended in a peroxide-cross-linkable rubber composition in **independent claim 1**, McKinstry et al (US04192790) disclose the any conventional elastomer or elastomer blend such as poly-butadiene, natural rubber and nitrile rubber (Col. 2, line 13-21). As shown in the Examples, the zinc methacrylate is from 1.5 phr to 5 phr based on the total composition, which reads on the limitation of instant claim. In absence of showing the criticality of the records, the optimized range of at least 5 parts by wt but not more than 40 parts by wt for component comprising 100 parts by wt of ethylenically unsaturated nitrile-conjugated diene-based high saturation copolymer and 20 to 120 parts by wt zinc methacrylate in known process render *prima facie obviousness* within one of ordinary skills in the arts. *In re Boesch*, 617 F.2d 272,276,205 USPQ 215, 219 (CCPA 1980).

As to component A) a rubber component comprising (i) natural rubber, (ii) poly-butadiene rubber in a peroxide-cross-linkable rubber composition in **independent claim 1**, McKinstry et al (US04192790) disclose any conventional elastomer or elastomer blend such as poly-butadiene, natural rubber and nitrile rubber (Col. 2, line 13-21). Further optional

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compounding ingredients including peroxide curing system curatives (Col. 2, line 57-61). In absence of showing the criticality of the records, the optimized range of more than 60 parts by wt but not more than 95 parts by wt for natural rubber and poly-butadiene blend in known process render *prima facie obviousness* within one of ordinary skills in the arts. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

As to component C) carbon black having a nitrogen specific surface area of not more than 70 m²/g in an amount so that the total weight of the components B) and C) becoming 20 to 70 parts by wt, based on 100 parts by wt of the total amount of components A) and B) in **independent claim 1**, McKinsty et al (US04192790) disclose carbon black from 0 to as much as 150 parts by wt, which would reads on the limitation of instant claim. , it would be obvious to one of ordinary skill in the art at the time of the invention to choose the nitrogen specific adsorption area for carbon black to be not greater than 70 m²/g in order to provide best function of fillers such as mechanical properties for the part of tire. “where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical”, *In re Woodruff* 16 USPQ2d 1934.

As to the limitation of **claim 4**, in view of substantially identical peroxide-cross-linkable rubber composition disclosed by Kanenari et al, and by applicant, it is examiner’s position to believe that the rubber composition of Kanenari et al would inherently possess the 50% module of rubber composition to be 3.0 to 10 MPa and a tanδ at 100 °C not more than 0.15 as claimed. Since USPTO does not have facilities to conduct the measurements, the burden now is shifted to Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to the usage for pneumatic run-flat tire in **claim 5**, reinforcing wall and/or bead filler without using an adhesive rubber in **claim 6**, because the rubber composition disclosed by Kanenari et al is substantially identical to the rubber composition in the applicant’s claim 1, it will be useful in pneumatic run-flat tire and reinforcing wall and/or bead filler as well, the intended use must result in a manipulative difference as compared to the prior art. *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

As to limitation of **claim 8**, McKinsty et al disclose the peroxide curing system (Col. 2, line 62).

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Although Applicant shows the criticality of nitrogen adsorption specific area in Example II-4 and Comp. Example II-4, however, the criticality of instant claim is around 70 m²/g, applicant provides the criticality of N₂SA by comparing N₂SA between 90 and 25~35 in those two Examples, Applicant is suggested to provide the result for N₂SA close to 70 m²/g to be commensurate in scope with the claim.

Applicant is also suggested to show the criticality of amount of melt salt of carboxylic acid in rubber composition of instant claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu
Art Unit: 1724
Date: June 9, 2007

DUANE SMITH
PRIMARY EXAMINER

D-S
6-11-07